

IN MEMORY OF PROFESSOR MICHAEL BRATYCHAK (1946–2023)

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Professor Michael Bratychak, D.Sc., passed away on August 20, 2023, following a long illness. Prof. Michael Bratychak was an Honored Education Employee of Ukraine and Academician of Ukrainian Oil and Gas Academy. He had been working at Lviv Polytechnic National University since 1970, and since 1994, he had been Head of the Department of Petroleum and Gas Processing.

Prof. Bratychak was born on February 02, 1946, in Pidhaici (Berezhany district, Ternopil region). In 1963, he completed his study in the secondary school and worked at Berezhany glass factory. In 1964, he entered Lviv Polytechnic Institute (Lviv, Ukraine).

After graduation in 1969 with the specialty *Technology of basic organic and petrochemical synthesis*, Michael Bratychak was engaged in scientific activities at the Department of Organic Chemistry of Lviv Polytechnic Institute as a laboratory assistant (1969–1970), research assistant (1970–1973), and senior researcher (1973–1980). In 1980, he defended the PhD thesis “Synthesis and

investigation of peroxide oligomers based on some polycondensation resins”.

After receiving a PhD degree, Michael Bratychak worked as an assistant at the Department of Organic Chemistry (1980–1982), Head of the research problem laboratory (1982–1988), and then as an Assistant Professor at the Department of Organic and Petrochemical Synthesis (1988–1992).

In 1990, M. Bratychak defended his Doctoral thesis “Synthesis, properties and application of oligomers and aliphatic azodynitryl compounds with peroxide groups” and, in 1993, he was awarded the title of Professor. Within 1992–1994, he held the position of Professor at the Department of Organic and Petrochemical Synthesis of Lviv Polytechnic Institute and in May 1994 was elected as Head of the Department of Petroleum and Gas Processing. During this period, he combines teaching, research, and service.

Prof. Michael Bratychak was the author and co-author of 6 monographs, more than 840 scientific publications, and 52 patents. Prof. M. Bratychak was an advisor of 2 doctoral and 20 PhD theses.

It is difficult to overestimate the contribution of Prof. Michael Bratychak to Ukrainian science. The direction of his scientific school was “Obtaining of oligomeric initiators, crosslinking and curing agents to produce a wide range of polymeric materials based on crude oil”. Professor M. Bratychak was the head of many scientific national research programs including “Production of petroleum resins from C₉ fraction” (2003–2004), “Production of reactive oligomers and composites based on them from pyrolysis waste products” (2005–2006), “Functional resins based on pyrolysis liquid products” (2007–2008), “Development of technology for the production of bitumen modified with functional oligomers” (2009–2010), “Development of technological basis for oxidative desulfurization of high-sulfur coal” (2011–2012), “Development of technological basis for the production of pulverized fuel from low-rank coal” (2013–2014), “Development of technology for the production of

bitumen and bituminous emulsions modified with condensation and polymerization resins.” The scientific direction initiated by Professor Bratyachak found its implementation in a series of international projects and contract with Dic Berlin GmbH Company (2007–2009).

Prof. Michael Bratyachak is world-renowned for his research in the synthesis of mono- and oligoinitiators and polymeric materials based on them. He developed the theoretical basis for the chemical modification of epoxy resins with hydroperoxides and functional peroxides.

Prof. M. Bratyachak was cooperating with many universities worldwide, including North Texas University (Denton, USA), Edinburgh Technical University (Edinburgh, UK), University of Montpellier (France), University of Chemical Technology (Prague, Czech Republic), Institute of Macromolecules named by Prof. Eloisa Mano (Rio de Janeiro, Brazil), Polytechnic institutes in Warsaw, Krakow, Wroclaw, Silesia, Gdansk (Poland).

Professor Michael Bratyachak was Editor-in-Chief of the scientific-technical journal *Chemistry & Chemical Technology* and a member of the Editorial boards of 7

foreign and 2 Ukrainian journals. As the long-term Editor-in-Chief of the journal, he edited and published 17 volumes of the journal, which include 66 issues and hundreds of articles. He was also co-authored numerous articles printed in the journal. Thanks to the efforts of Prof. Bratyachak, the journal *Chemistry & Chemical Technology* is indexed and abstracted in SCOPUS, Web of Science, and many other databases and archives.

Michael Bratyachak initiated and headed 11 scientific-technical conferences “Advance in Oil and Gas Industry and Petrochemistry” (since 2004), which were attended by leading scientists and representatives of the industry not only from Ukraine but from many other countries as well.

It was with great sadness that we received the tragic news of the death of this unique person and great scientist who had been associated with Lviv Polytechnic National University all his life and was one of the most famous Ukrainian scientists. Unfortunately, Professor Mykhailo Bratyachak is no longer with us. His absence is a significant loss for his family, colleagues, and the entire chemical community.